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Summary report on the technical analysis of the first biennial update report of Peru submitted on 20 December 2014

In accordance with decision 2/CP.17, paragraph 41(a), Parties not included in Annex I to the Convention (non-Annex I Parties), consistent with their capabilities and the level of support provided for reporting, should submit their first biennial update report (BUR) by December 2014. The least developed country Parties and small island developing States may submit BURs at their discretion.

Further, in accordance with paragraph 58(a) of the same decision, the first round of international consultation and analysis (ICA) will be conducted for non-Annex I Parties commencing within six months of the submission of their first BURs. The process of ICA includes two steps: the technical analysis of the submitted BURs, followed by a workshop on the facilitative sharing of views under the Subsidiary Body for Implementation.

This summary report presents the results of the technical analysis of the first BUR of Peru undertaken by a team of technical experts in accordance with the modalities and procedures contained in the annex to decision 20/CP.19.

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I. Introduction and process overview

A. Introduction

1. In accordance with decision 2/CP.17, paragraph 41(a), Parties not included in Annex I to the Convention (non-Annex I Parties), consistent with their capabilities and the level of support provided for reporting, should submit their first biennial update report (BUR) by December 2014. The least developed country Parties and small island developing States may submit BURs at their discretion. Further, in accordance with paragraph 58(a) of the same decision, the first round of international consultation and analysis (ICA) will be conducted for non-Annex I Parties commencing within six months of the submission of their first BURs. The process of ICA includes two steps: the technical analysis of the submitted BURs, resulting in a summary report for each BUR analysed, followed by a workshop on the facilitative sharing of views under the Subsidiary Body for Implementation.

2. This summary report presents the results of the technical analysis of the first BUR of Peru undertaken by a team of technical experts (TTE) in accordance with the provisions on the composition, modalities and procedures of the TTE under ICA contained in the annex to decision 20/CP.19.

B. Process overview

3. Peru submitted its first BUR on 30 December 2014.

4. The technical analysis of the BUR took place from 18 to 22 May 2015 in Bonn, Germany, and was undertaken by the following TTE, drawn from the UNFCCC roster of experts on the basis of the criteria defined in decision 20/CP.19, annex, paragraphs 2–6: Ms. Estefania Ardila Robles (Consultative Group of Experts on National Communications from Parties not included in Annex I to the Convention member from Colombia), Ms. Diana Barba (Colombia), Ms. Mausami Desai (United States of America), Mr. Cristobal Felix Diaz Morejon (Cuba), Ms. Thelma Krug (Brazil) and Ms. Maria Jose Lopez (Belgium). Ms. Ardila Robles and Ms. Desai were the co-leads. Ms. Alma Jean and Ms. Ting Li (secretariat) provided administrative support to the TTE.

5. During the technical analysis, in addition to the written exchange, through the secretariat, to provide technical clarifications on the information reported in the BUR, the TTE and Peru also engaged in discussion via teleconferencing, primarily to reach a common understanding on the identification of the capacity-building needs. Following the technical analysis of the BUR, the TTE prepared and shared a draft summary report with Peru on 11 August 2015 for its review and comments. Peru, in turn, provided its feedback on the draft summary report on 10 November 2015.

6. The TTE responded to and incorporated the comments referred to in paragraph 5 above from Peru and finalized, in consultation with Peru, the summary report on 8 February 2016.

II. Technical analysis of information reported in the biennial update report

A. Scope of the technical analysis

7. The scope of the technical analysis is outlined in decision 20/CP.19, annex, paragraph 15, according to which the technical analysis aims to, without engaging in a discussion on the appropriateness of these actions, increase transparency of mitigation actions and their effects, and shall entail the following:

(a) Identification of the extent to which the elements of information listed in the ICA guidelines contained in decision 2/CP.17, annex IV, paragraph 3(a), are included in the BUR of the Party concerned (see chapter II.B);

(b) A technical analysis of the information contained in the BUR, specified in the "UNFCCC biennial update reporting guidelines for Parties not included in Annex I to the Convention" (hereinafter referred to as the UNFCCC reporting guidelines on BURs) contained in annex III to decision 2/CP.17, and any additional technical information provided by the Party concerned (see chapter II.C);

(c) Identification of, in consultation with the Party concerned, capacity-building needs related to the facilitation of reporting in accordance with annex III to decision 2/CP.17 and to the participation in ICA in accordance with annex IV to decision 2/CP.17, taking into account Article 4, paragraph 3, of the Convention (see chapter II.D).

8. The remainder of this chapter presents the results of each of the three parts of the technical analysis of Peru's BUR outlined in paragraph 7 above.

B. Overview of the elements of information reported

9. The elements of information referred to in paragraph 7(a) above include: the national greenhouse gas (GHG) inventory report; mitigation actions, including a description of such actions, an analysis of their impacts and the associated methodologies and assumptions, and the progress made in their implementation; information on domestic measurement, reporting and verification (MRV); and support received.

10. Further, in accordance with decision 20/CP.19, annex, paragraph 15(a), in undertaking the technical analysis of the submitted BUR, the TTE shall identify the extent to which the elements of information listed in the guidelines contained in decision 2/CP.17, annex IV, paragraph 3(a), are included in the BUR of the Party concerned. The results of this analysis are presented in tables 1, 2 and 3 below.

1. National greenhouse gas inventory

11. The parts of the UNFCCC reporting guidelines on BURs on reporting information on GHG emissions by sources and removals by sinks in BURs are contained in decision 2/CP.17, paragraph 41(g), and annex III, paragraphs 3–10, of the same decision. Further, as per decision 2/CP.17, annex III, paragraph 3, non-Annex I Parties should submit updates of national GHG inventories according to paragraphs 8–24 of the "Guidelines for the preparation of national communications from Parties not included in Annex I to the Convention" as contained in the annex to decision 17/CP.8. The scope of the updates on national GHG inventories should be consistent with capacities, time constraints, data availabilities and the level of support provided by developed countries Parties for biennial update reporting.

12. Table 1 below presents results of the identification of the extent to which the elements of information on GHGs are included in the first BUR of Peru in accordance with the relevant parts of the UNFCCC reporting guidelines on BURs.

Table 1
Identification of the extent to which the elements of information on greenhouse gases are included in the first biennial update report of Peru

Decision	*Provision of the reporting guidelines*	*Yes/ Partly/No*	*Comments on the extent of the information provided*
Decision 2/CP.17, paragraph 41(g)	The first BUR shall cover, at a minimum, the inventory for the calendar year no more than four years prior to the date of the submission, or more recent years if information is available	Yes	The inventory information is provided for the year 2010, which is no more than four years prior to the date of the submission (2014)
Decision 2/CP.17, annex III, paragraph 5	The updates of the sections on the national inventories of anthropogenic emissions by sources and removals by sinks of all GHGs not controlled by the Montreal Protocol should contain updated data on activity levels based on the best information available using the Revised 1996 IPCC Guidelines for National GHG Inventories, the IPCC good practice guidance and Uncertainty Management in National GHG Inventories, and the IPCC good practice guidance for LULUCF; any change to the emission factor may be made in the subsequent full national communication	Partly	Estimates are provided for the year 2010, using the methodologies contained in the Revised 1996 IPCC Guidelines and the IPCC good practice guidance for LULUCF. The updated activity data are provided in module 4 of table 9 (for agriculture) and module 5 of table 9 (for LULUCF).For non-AFOLU sectors, only data sources are mentioned
Decision 2/CP.17, annex III, paragraph 9	The inventory section of the BUR should consist of a national inventory report as a summary or as an update of the information contained in decision 17/CP.8, annex, chapter III (National greenhouse gas inventories), including:	Partly	An update of the inventory is provided in the BUR. However, some information in tables 1 and 2 is missing
	• Table 1 (National greenhouse gas inventory of anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol and greenhouse gas precursors)	Partly	The data are presented at the aggregated level. Sectoral background data with activity data and emission factors are missing. Solvent uses are not estimated because of a lack of data. For LULUCF, some categories are missing
	• Table 2 (National greenhouse gas inventory of anthropogenic emissions of HFCs, PFCs and SF_6)	No	This table is not provided in the BUR

Decision	*Provision of the reporting guidelines*	*Yes/ Partly/No*	*Comments on the extent of the information provided*
Decision 2/CP.17, annex III, paragraph 6	Non-Annex I Parties are encouraged to include, as appropriate and to the extent that capacities permit, in the inventory section of the BUR:		
	• Tables included in annex 3A.2 to chapter 3 of the IPCC good practice guidance for LULUCF	No	These tables are not given in the BUR
	• The sectoral report tables annexed to the Revised 1996 IPCC Guidelines	No	The Party did not provide in the BUR the sectoral report tables annexed to the Revised 1996 IPCC Guidelines
Decision 2/CP.17, annex III, paragraph 7	Each non-Annex I Party is encouraged to provide a consistent time series back to the years reported in the previous national communications	Partly	Estimates for the years 1994, 2000 and 2010 are provided. Improvements have been made to the 2010 data for the LULUCF sector using the IPCC good practice guidance, but the 1994 and 2000 data have not been updated, so the data for the years 1994 and 2000 have not been recalculated for LULUCF to reflect new methodologies, emission factors and activity data used to generate the 2010 estimates. Hence, the time series is not fully consistent
Decision 2/CP.17, annex III, paragraph 8	Non-Annex I Parties that have previously reported on their national GHG inventories contained in their national communications are encouraged to submit summary information tables of inventories for previous submission years (e.g. for 1994 and 2000)	Partly	A summary table is provided for the years 1994, 2000 and 2010, but it contains aggregated emissions at the sectoral level only (no subcategories) and does not include LULUCF
Decision 2/CP.17, annex III, paragraph 10	Additional or supporting information, including sector-specific information, may be supplied in a technical annex	No	This information is not provided in the BUR
Decision 17/CP.8, annex, paragraph	Non-Annex I Parties are encouraged to describe procedures and arrangements undertaken to collect and archive data for the preparation of	Partly	Information is provided on the arrangements for the preparation of national GHG

Decision	*Provision of the reporting guidelines*	*Yes/ Partly/No*	*Comments on the extent of the information provided*
13	national GHG inventories, as well as efforts to make this a continuous process, including information on the role of the institutions involved		inventories and BURs. However, the roles of the specific institutions engaged are only briefly presented. The BUR states Peru's plans for making this a continuous process, but no indication is provided on the efforts needed to do it. Data sources, institutions and some stakeholders are mentioned, but there are no detailed descriptions of arrangements and procedures (in particular on archiving)
Decision 17/CP.8, annex, paragraph 14	Each non-Annex I Party shall, as appropriate and to the extent possible, provide in its national inventory, on a gas-by-gas basis and in units of mass, estimates of anthropogenic emissions of the following gases by sources and removals by sinks:	Yes	The information is provided in table 9 for all gases and sectors, in mass units as well as in units of CO_2 eq
	• CO_2	Yes	
	• CH_4	Yes	
	• N_2O	Yes	
Decision 17/CP.8, annex, paragraph 15	Non-Annex I Parties are encouraged, as appropriate, to provide information on anthropogenic emissions by sources of HFCs, PFCs and SF_6	No	F-gases are not reported
Decision 17/CP.8, annex, paragraph 19	Non-Annex I Parties should, to the extent possible, and if disaggregated data are available, report emissions from international aviation and marine bunker fuels separately in their inventories:		
	• International aviation	No	Emissions from international aviation are not reported in the BUR
	• Marine bunker fuels	No	Emissions from marine bunker fuels are not reported in the BUR
Decision 17/CP.8, annex, paragraph	Non-Annex I Parties are encouraged, as appropriate, to report on anthropogenic emissions by sources of other GHGs such as:		

Decision	*Provision of the reporting guidelines*	*Yes/ Partly/No*	*Comments on the extent of the information provided*
16	• CO	No	Emissions from CO are not reported in the BUR
	• NO_x	No	Emissions from NO_x are not reported in the BUR
	• NMVOCs	No	Emissions from NMVOCs are not reported in the BUR
Decision 17/CP.8, annex, paragraph 17	Other gases not controlled by the Montreal Protocol, such as SO_x, included in the Revised 1996 IPCC Guidelines, may be included at the discretion of the Parties	No	Other gases, including SO_x, are not reported in the BUR
Decision 17/CP.8, annex, paragraph 21	Non-Annex I Parties are encouraged to provide information on methodologies used in the estimation of anthropogenic emissions by sources and removals by sinks of GHGs not controlled by the Montreal Protocol, including a brief explanation of the sources of emission factors and activity data. If non-Annex I Parties estimate anthropogenic emissions and removals from country-specific sources and/or sinks that are not part of the Revised 1996 IPCC Guidelines, they should explicitly describe the source and/or sink categories, methodologies, emission factors and activity data used in their estimation of emissions, as appropriate. Parties are encouraged to identify areas where data may be further improved in future communications through capacity-building:		
	• Information on methodologies used in the estimation of anthropogenic emissions by sources and removals by sinks of GHGs not controlled by the Montreal Protocol	Partly	Limited information is provided on the methodologies used Generally, tier 1 is applied. The use of some local specific emission factors for LULUCF in 2010 is mentioned
	• Explanation of the sources of emission factors	Partly	The Party sometimes refers to the use of the Revised 1996 IPCC Guidelines as the source of default values
	• Explanation of the sources of activity data	Partly	Sources of activity data are mentioned for the

Decision	*Provision of the reporting guidelines*	*Yes/ Partly/No*	*Comments on the extent of the information provided*
			non-AFOLU sector. The Party mentions the use of satellite imagery to estimate emissions from conversion of forest land to other land-use categories. It also indicates in Figures 14 and 15 the different institutions engaged as data providers
	• If non-Annex I Parties estimate anthropogenic emissions and removals from country-specific sources and/or sinks that are not part of the Revised 1996 IPCC Guidelines, they should explicitly describe:	NA	Peru reports all IPCC categories; there are no country-specific categories in the national GHG inventory
	o Source and/or sink categories		
	o Methodologies		
	o Emission factors		
	o Activity data		
	• Parties are encouraged to identify areas where data may be further improved in future communications through capacity-building	Partly	The Party mentioned that the inventories for 1994 and 2000 will be updated taking into account the improvements introduced in the 2010 inventory, but no detailed information is provided on improvements through capacity-building
Decision 17/CP.8, annex, paragraph 24	Non-Annex I Parties are encouraged to provide information on the level of uncertainty associated with inventory data and their underlying assumptions, and to describe the methodologies used, if any, for estimating these uncertainties:		
	• Level of uncertainty associated with inventory data	No	The information is not available in the BUR
	• Underlying assumptions	No	The information is not available in the BUR
	• Methodologies used, if any, for estimating these uncertainties	No	The information is not available in the BUR

Abbreviations: AFOLU = agriculture, forestry and other land use, BUR = biennial update report, CO_2 eq = carbon dioxide equivalent, F-gas = fluorinated gas, GHG = greenhouse gas, LULUCF = land use, land-use change and forestry, IPCC =

Intergovernmental Panel on Climate Change, IPCC good practice guidance = *Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories*, IPCC good practice guidance for LULUCF = *Good Practice Guidance for Land Use, Land-Use Change and Forestry*, NA = not applicable, NMVOC = non-methane volatile organic compound, Revised 1996 IPCC Guidelines = *Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories*.

2. Mitigation actions and their effects

13. The parts of the UNFCCC reporting guidelines on BURs on reporting information on mitigation actions in the BUR are contained in decision 2/CP.17, annex III, paragraphs 11–13.

14. Peru did report mitigation actions in its first BUR. The mitigation actions reported are provided in tabular format.

15. Table 2 below presents results of the identification of the extent to which the elements of information on mitigation actions are included in the first BUR of Peru in accordance with the relevant parts of the UNFCCC reporting guidelines on BURs.

Table 2
Identification of the extent to which the elements of information on mitigation actions are included in the first biennial update report of Peru

Decision	*Provision of the reporting guidelines*	*Yes/ Partly/No*	*Comments on the extent of the information provided*
Decision 2/CP.17, annex III, paragraph 12	For each mitigation action or groups of mitigation actions including, as appropriate, those listed in document FCCC/AWGLCA/2011/INF.1, developing country Parties shall provide the following information to the extent possible:		
(a)	Name and description of the mitigation action, including information on the nature of the action, coverage (i.e. sectors and gases), quantitative goals and progress indicators	Partly	The name and description of the mitigation actions are provided in table 12 of section 4 and in annex 1. Coverage of actions is partially described (sectors are included, but the gases covered are not listed). Information related to quantitative goals and progress indicators are provided for only 2 ('NAMA café' and 'Proyecto Transfer II') out of 10 NAMAs. For other mitigation actions, information related to coverage, quantitative goals and progress indicators is not provided
(b)	Information on methodologies and assumptions: • Methodologies	No	No information is provided on the

Decision	*Provision of the reporting guidelines*	*Yes/ Partly/No*	*Comments on the extent of the information provided*
			methodologies used
	• Assumptions	No	No information is provided on the assumptions
(c)	Objectives of the action and steps taken or envisaged to achieve that action:		
	• Objectives of the action	Yes	Information about objectives of the actions is included in table 12 of section 4 and in annex 1
	• Steps taken or envisaged to achieve that action	Partly	For all mitigation actions reported in annex 1, information about steps taken or envisaged is not provided
(d)	Information on the progress of implementation of the mitigation actions and the underlying steps taken or envisaged, and the results achieved, such as estimated outcomes (metrics depending on type of action) and estimated emission reductions, to the extent possible:		
	• Progress of implementation of the mitigation actions	Partly	Information about progress of implementation is partially provided. In some cases, the Party provides information on the progress of the formulation of mitigation actions (because most of the mitigation actions have not yet started their implementation phase)
	• Underlying steps taken or envisaged	Partly	Peru provides information on the steps envisaged for some NAMAs and the steps taken in the feasibility phase of the NAMAs. The Party does not provide information on the steps taken and envisaged for the mitigation actions reported in annex 1
	• Results achieved, such as estimated outcomes (metrics depending on	No	Estimated outcomes are not reported for

Decision	*Provision of the reporting guidelines*	*Yes/ Partly/No*	*Comments on the extent of the information provided*
	type of action) and estimated emission reductions, to the extent possible		any of the mitigation actions
(e)	Information on international market mechanisms	Yes	Information on the participation of Peru in international market mechanisms (including the CDM and voluntary carbon market projects and REDD-plus[a] projects) is provided in section 4, tables 13–15, and in annexes 2 and 3
Decision 2/CP.17, annex III, paragraph 13	Parties should provide information on the description of domestic measurement, reporting and verification arrangements	Partly	General information is included (on the agencies involved and their roles), but information on actual or planned arrangements and mechanisms is not

Abbreviations: CDM = clean development mechanism, NAMA = nationally appropriate mitigation action.

[a] In decision 1/CP.16, paragraph 70, the Conference of the Parties encouraged developing country Parties to contribute to mitigation actions in the forest sector by undertaking the following activities: reducing emissions from deforestation; reducing emissions from forest degradation; conservation of forest carbon stocks; sustainable management of forests; and enhancement of forest carbon stocks.

3. Finance, technology and capacity-building needs and support received

16. The parts of the UNFCCC reporting guidelines on BURs on reporting information on finance, technology and capacity-building needs and support received in the BUR are contained in decision 2/CP.17, annex III, paragraphs 14–16.

17. Table 3 below presents results of the identification of the extent to which the elements of information on finance, technology and capacity-building needs and support received are included in the BUR of Peru in accordance with the relevant parts of the UNFCCC reporting guidelines on BURs.

Table 3
Identification of the extent to which the elements of information on finance, technology and capacity-building needs and support received are included in the first biennial update report of Peru

Decision	*Provision of the reporting guidelines*	*Yes/ Partly/No*	*Comments on the extent of the information provided*
Decision 2/CP.17, annex III, paragraph 14	Non-Annex I Parties should provide updated information on constraints and gaps, and related financial, technical and capacity-building needs:		
	• Constraints and gaps	No	These are not reported
	• Related financial, technical and capacity-building needs	Partly	General information on activities reported for

Decision	*Provision of the reporting guidelines*	*Yes/ Partly/No*	*Comments on the extent of the information provided*
			NAMA development, the national GHG inventory system and mitigation projects are included in table 17. It is not clear, however, what the specific needs associated with these pending activities are
Decision 2/CP.17, annex III, paragraph 15	Non-Annex I Parties should also provide updated information on financial resources, technology transfer, capacity-building and technical support received from the GEF, Annex II Parties and other developed country Parties, the GCF and multilateral institutions for activities relating to climate change, including for the preparation of the current BUR	Yes	Information is reported in section 5.1 (Support received) and annex 4. Disaggregated support received is reported on pp. 85–98
Decision 2/CP.17, annex III, paragraph 16	With regard to the development and transfer of technology, non-Annex I Parties should provide information on technology needs, which must be nationally determined, and technology support received:		
	• Technology needs, which must be nationally determined	No	This information is not provided
	• Technology support received	Partly	An aggregate figure is included in table 16, but it is not possible to discern what this support is related to. General information to describe this support is dispersed throughout annexes I–IV

Abbreviations: BUR = biennial update report, GCF = Green Climate Fund, GEF = Global Environment Facility, GHG = greenhouse gas, NAMA = nationally appropriate mitigation action.

C. Technical analysis of the information reported

18. The technical analysis referred to in paragraph 7(b) above aims to, without engaging in discussion on the appropriateness of these actions, increase transparency of mitigation actions and their effects. Accordingly, the technical analysis focused on the transparency of information reported in BURs.

19. In addition to covering the information in the BUR and any additional technical information provided by the Party concerned, the technical analysis also focused, in relation to information reported on national GHG inventories, on the consistency of the methods used for developing those inventories with the appropriate methods developed by the Intergovernmental Panel on Climate Change (IPCC) and referred to in the UNFCCC

reporting guidelines on BURs. The results of the technical analysis are presented in the remainder of the chapter.

1. Information on national circumstances and institutional arrangements relevant to the preparation of national communications on a continuous basis

20. As per the scope defined in decision 2/CP.17, annex III, paragraph 2, the BURs should provide an update to information contained in the most recently submitted national communications, including, among other things, information on national circumstances and institutional arrangements relevant to the preparation of national communications on a continuous basis. For national communications, non-Annex I Parties report national circumstances following reporting guidance contained in decision 17/CP.8, annex, paragraphs 3–5.

21. In accordance with decision 17/CP.8, annex, paragraph 3, Peru, in its BUR, reported the following information on national circumstances, on the basis of which it will address climate change and its adverse impacts and/or which may affect its capability for addressing them: the climate change policy framework, including the main strategies and their scope; geographical, political and sociodemographic information; and data and information on the country's industrial and economic profile, including sectoral trends and, when applicable, the identification of the main factors of change.

22. Peru provides graphs and tables to summarize and illustrate the most relevant information regarding its national circumstances, including key macroeconomic, social and sectoral indicators. This information transparently describes the national circumstances, in particular, the biophysical, demographic, political and economic features of Peru.

23. The TTE notes that the information provided by Peru with regard to national circumstances, in particular, that related to population growth, regional distribution and sectoral economic trends is consistent with and provides adequate background to understanding subsequent sections of the BUR, particularly the GHG inventory and mitigation actions.

24. Peru, in its BUR, described institutional arrangements relevant to the preparation of national communications and BURs on a continuous basis. The description covers key aspects of the institutional arrangements such as an overarching policy framework that mandates their establishment, the legal status, and roles of the national entity in charge of compiling and validating data and information and of compiling BURs (Directorate for Climate Change, Desertification and Water Resources at the Ministry of Environment) and of the executing core team that coordinates the implementation of the abovementioned activities. Other participating institutions and their roles in the preparation of BURs are also described.

25. In addition, the Party describes its plans to systematize the GHG inventory process and related data exchange and quality assurance/quality control procedures through INFOCARBONO (a national system created by decree), and identifies the coordinating institution, other participating agencies and their roles. The information included in the BUR demonstrates that although partially implemented at the time of the report submission, Peru is making efforts to strengthen the institutional arrangements that are necessary for the sustainable preparation of GHG inventories on a continuous basis.

26. In accordance with decision 2/CP.17, annex III, paragraph 13, Peru provides a description of the existing institutional structure and roles for the implementation of the processes of nationally appropriate mitigation action (NAMA) design, implementation, monitoring and registry, for which general steps are also outlined. This is consistent with the guidance contained within annex to decision 21/CP.19 and has enhanced the transparency of the information reported by the Party in the mitigation section.

27. Although existing mechanisms and procedures for information transfer and exchange and stakeholder involvement are not described, Peru, in its BUR, presents a description of the institutions that served as information sources for the preparation of the support section. In addition, the TTE notes that Peru aims to systematize the administration of financial resources from bilateral and multilateral funds through the platform PRONAGECC, which may facilitate continuous reporting in the future and thus contribute to the biennial reporting of this information.

28. The information reported transparently describes the institutional arrangements of Peru. Moreover, it demonstrates that although the existing arrangements might not be able to meet the requirements of the preparation of national communications and BURs on a continuous basis, concrete steps are being taken to strengthen them.

2. National greenhouse gas emissions by sources and removals by sinks

29. Peru has included in its BUR a national inventory report containing an update of its second national communication, which addresses anthropogenic emissions and removals for the year 2000. An update was carried out for the year 2010 using the methodologies established in the *Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories* (hereinafter referred to as the Revised 1996 IPCC Guidelines) ensure consistency with the estimates provided in previous national inventories (1994 and 2000). The Party applied the IPCC *Good Practice Guidance for Land Use, Land-Use Change and Forestry* (hereinafter referred to as the IPCC good practice guidance for LULUCF) to estimate the net emissions from land use, land-use change and forestry (LULUCF) for 2010.

30. Peru provided a time series with the estimates from previous inventory years but excluded the LULUCF sector due to the use of different methodological approaches and emission factors and the lack of time to recalculate the estimates for 1994 and 2000 accordingly. During the technical analysis week, Peru clarified that it is developing new estimates for the years 2000, 2005, 2010 and 2012 for all sectors.

31. Peru has not included reporting tables in the BUR; however, during the technical analysis week, Peru provided the reporting tables, including those from annex 3A.2 to chapter 3 of the IPCC good practice guidance for LULUCF. These tables give the updated activity data used for estimating the 2010 anthropogenic emissions and removals from LULUCF, as well as the emission factors applied. The categories for LULUCF in table 9 of the BUR for the year 2010 are those from the Revised 1996 IPCC Guidelines. However, the estimates have been generated using the IPCC good practice guidance for LULUCF but mapped to the Revised 1996 IPCC Guidelines subcategories for LULUCF ('changes in carbon stock and other woody biomass' and 'forest and grassland conversion').

32. Peru did not address uncertainties in the BUR, but has identified the main sources of uncertainty, which are related to gaps and the quality of information available, as well as the use of default values that do not always reflect the conditions in the country. In consultation with the TTE during the technical analysis week, Peru mentioned that uncertainty assessment has already been identified as an issue to be better addressed in future inventories.

33. The BUR does not provide transparent information regarding the tier level methodology applied to the different subcategories and on the methodologies used to generate the inventory estimates. The TTE noted that this information could be relevant for the identification of potential mitigation actions, particularly in the LULUCF sector, and could improve the transparency.

34. With regard to GHG inventory development, Peru has indicated that, to date, the inventories have been developed by consultants, but that the capacity is expected to be developed under the national greenhouse gas inventory system (INFOCARBONO) to allow

the country to develop national inventories (and BURs) in a periodic and systematic way. Capacity-building is expected to enhance the ability of technical teams developing the sectoral inventories with regard to the data needs and methodological approaches.

35. During the technical analysis week, Peru confirmed that it plans to take into account the need to continuously improve the transparency, consistency, comparability, completeness and accuracy in its national GHG inventories and to implement the most appropriate steps and institutional arrangements in order to allow this. Peru explained the most important challenges in estimating emissions as well as its specific capacity-building needs. The Party is just starting the processes by implementing all required institutional arrangements through detailed guidelines and sectoral meetings and workshops. Peru confirmed that, as a first step, it plans to identify the capacity-building needs by sector in 2015. Capacity-building will be needed in the next year (2016).

36. Regarding the completeness of the inventory, Peru has not estimated carbon dioxide (CO_2) from fuel combustion using both the reference approach and the sectoral approach and analysed the differences between the two approaches. Peru has not disaggregated data emissions from domestic and international aviation and marine fuels and has not provided estimates for fluorinated gases and indirect emissions (carbon monoxide, nitrogen oxides, non-methane volatile organic compounds and sulphur oxides). In parallel, the Party did not undertake any key source analyses to prioritize the work nor any adequate uncertainty assessments. The TTE notes that the transparency of the inventory would be improved if such information is included in future BURs.

37. Peru reported all categories required in the Revised 1996 IPCC Guidelines and updated the estimates for the year 2010. Activity data and emission factors were not included in the BUR but were made available to the TTE during the technical analysis week as input data in the reporting tables used by the Party to generate the estimates.

38. Table 9 in the BUR includes estimates of CO_2 and non-CO_2 emissions for all sectors. For LULUCF, the table does not include estimates for the Revised 1996 IPCC Guidelines subcategories 'abandonment of managed land' or 'CO_2 emissions and removals from soils', nor does it provide the corresponding notation keys to indicate that emissions and/or removals from these subcategories have not been estimated. The TTE notes that the provision of a table with the appropriate notation keys would enhance the transparency of the reporting.

39. The availability of the reporting tables after consultation with the Party helped to understand the efforts made by Peru in reporting net emissions from LULUCF. The reporting tables indicate the methodologies used (i.e. references to equations), the emission factors applied and activity data for 2010. Further, Peru is building a consistent time series for the years 2000, 2005, 2010 and 2012 that will consolidate the use of the IPCC good practice guidance for LULUCF to be included in its next national communication.

40. For carbon pools, Peru has included the above- and below-ground biomasses. The reporting tables do not include information on the other pools, which is also required in the IPCC good practice guidance for LULUCF.

3. Mitigation actions and their effects, including associated methodologies and assumptions

41. As indicated in table 2 above, Peru reported, in its BUR, information on mitigation actions and their effects.

42. Peru reports, in its BUR, 10 NAMAs and the other mitigation initiatives formulated mainly by the public sector and civil organizations. In addition, the Party reports its participation in international market mechanisms such as the clean development mechanism

(CDM) (65 projects), voluntary carbon markets (22 projects) and REDD-plus[1] (20 projects) in tables 13–15 of section 4 and in annexes 2 and 3. Mitigation actions cover all sectors (energy, waste, industry, forestry and agriculture), and are at various stages of implementation.

43. The TTE acknowledges that Peru provides a clear context of the technical and political processes that it conducted in order to prioritize its mitigation actions. This process was supported by Plan CC, which is a programme financed by international cooperation that aims to build scientific and political bases for low carbon development planning.

44. Consistent with decision 2/CP.17, annex III, paragraph 12(a), Peru includes in section 4 and annexes 1–3 of the BUR the names and general descriptions of all mitigation actions reported (including the NAMAs). However, in the case of some mitigation actions, a clear and transparent description was not found (i.e. for the NAMA called 'NAMA palma aceitera', the description was limited to the objective). In addition, information about coverage, quantitative goals and progress indicators was provided for two NAMAs ('NAMA café' and 'Proyecto Transfer II'). In order to increase the transparency, this information may be included in subsequent BURs submitted by the Party.

45. According to decision 2/CP.17, annex III, paragraph 12(b), Parties shall provide information on the methodologies and assumptions used to estimate GHG emission reductions. However, this information was not included in tabular format or in any other part of the BUR. In consultation with Peru during the technical analysis week, the TTE noted that most of the NAMAs in Peru are under formulation and that the expected emission reductions are still being calculated. For some NAMAs, the CDM, sectoral guidelines of good hygienic practices and industry guidelines (e.g. Cement Sustainable Initiative methodologies) are being used. However, the methodologies and assumptions for most of the mitigation actions are still being chosen; including this information in subsequent BURs could improve the transparency.

46. In accordance with decision 2/CP.17, annex III, paragraph 12(c), Peru provides in its BUR a clear explanation of the objectives, which are included in the description given in section 4, table 12, for the case of NAMAs. Information about the institutions involved in the formulation of NAMAs and available sources for funding is also provided. In addition, Peru reports its progress on some feasibility studies that have been conducted, as well as on the elaboration of ideas notes of NAMAs. In addition, the Party reports the main components of the mitigation actions that should be implemented. However, the steps envisaged and the steps taken are only partially reported for most of the NAMAs. In the case of other mitigation actions reported in annex 1, the steps taken and envisaged are not provided. For subsequent BURs, reporting and differentiating between the steps taken and envisaged could improve the transparency in the description of the planning process and the progress of the mitigation actions.

47. The TTE notes that most of the NAMAs from Peru are under formulation, and, as such, the BUR did not include information on the progress of the implementation or the estimated outcomes. Once these NAMAs are implemented, including this information in subsequent BURs could improve the transparency of the information reported.

48. The TTE commends the efforts of Peru to report detailed and transparent information on its participation in international market mechanisms, mainly in the CDM and voluntary carbon markets. This information includes the general statistics of the

[1] In decision 1/CP.16, paragraph 70, the Conference of the Parties encouraged developing country Parties to contribute to mitigation actions in the forest sector by undertaking the following activities: reducing emissions from deforestation; reducing emissions from forest degradation; conservation of forest carbon stocks; sustainable management of forests; and enhancement of forest carbon stocks.

projects developed by sector, as well as their mitigation potentials and the actual emission reductions achieved.

4. Constraints and gaps, and related financial, technical and capacity-building needs, including a description of support needed and received

49. The TTE noted that an analysis of constraints and gaps was not included in the BUR. However, reference is made, in table 17 of the BUR, to the need for financial support to enhance institutionalization and governance, technology transfer and education, training, information and communication on low carbon development across three main areas: NAMA development, the national GHG inventory system and mitigation projects. Financial needs to cover such actions are estimated at USD 450 million within the next five years, but sources of finance have not yet been determined.

50. The Party reported information on financial resources, technology transfer, capacity-building and technical support received from the Global Environment Fund, Parties included in Annex II to the Convention and other developed country Parties, the Green Climate Fund and multilateral institutions for activities relating to climate change, including for the preparation of the current BUR. Information on support received, disaggregated by sources, was also provided. The TTE noted that information on nationally determined technology needs is not included in the BUR.

51. The TTE also notes that information on financial resources, technology transfer, capacity-building and technical support received is presented comprehensively in the BUR, and commends Peru for this effort. The TTE nevertheless notes that information under section 5.1, particularly in table 16, and the information provided in annex 4 is consistent as per the end results, yet it cannot be reconciled and interpreted in conjunction. For instance, it is not possible to discern which of the projects listed in annex 4 contributed to providing Peru with support in the area of technology transfer. Applying consistent disaggregation criteria for support received across areas would enhance the clarity regarding how the two sets of information complement each other.

52. Information on constraints and gaps is not available in the BUR. During communication with the Party, the TTE was informed that resource and time constraints have prevented this analysis from being conducted in Peru, and that there are plans to produce it for future BURs and national communications.

53. Following communication with the Party, the TTE noted that nationally determined technology needs have not been included in the BUR. The Party indicated that this is the first BUR and that the time available to conduct an assessment was limited. The Party indicated that it plans to include the findings from such an assessment in its next BUR. Inclusion of this information will enhance the transparency of the technology needs and associated capacity-building and financial needs.

5. Domestic measurement, reporting and verification

54. In sections 2.2.3 and 2.2.4 of the BUR, Peru includes information on the institutional arrangements for the design and national approval of NAMAs and CDM projects. However, the Party does not provide specific information about the institutions, entities, arrangements and systems involved in the domestic monitoring of NAMAs or the processes for the collection and management of relevant information for this task.

55. The TTE understands that reporting on domestic MRV of domestically supported NAMAs is voluntary. However, as a result of consultation with the Party, the TTE was informed that Peru is planning to develop an MRV system for mitigation actions and will require capacity-building for the design and management of the system.

D. Identification of capacity-building needs

56. In consultation with Peru, the TTE identified the following capacity-building needs related to the facilitation of the preparation of subsequent BURs and participation in ICA:

(a) Establishment of procedures and specific arrangements to guarantee the permanent involvement of relevant institutions in the systematic collection, compilation and validation of data and information on constraints and gaps, and support needed and received in each of the action areas identified in the BUR;

(b) Establishment of good practices for ensuring regular data collection to prepare the inventory on a biennial basis. Assistance is required for each sector, in accordance with the specific needs and related tasks that Peru is in the process of identifying;

(c) Assistance in developing a national GHG inventory improvement plan, including preparation of a key category analysis and training on conducting uncertainty analysis to assist in prioritization of identified improvements;

(d) Assistance in establishing good practices for ensuring regular collection of data to support BURs;

(e) Assistance in improving estimates for the energy sector inventory, specifically compilation and reporting of information on the reference approach, in comparison with the sectoral approach;

(f) Assistance with improving activity data to estimate emissions, in particular, for estimating emissions from mobile combustion, waste and LULUCF;

(g) Assistance in compiling and reporting on emissions of fluorinated gases;

(h) Assistance in developing country-specific emission factors for a greater number of key emission categories;

(i) Support with the calculation of robust baselines for NAMAs and the improvement of the methodologies and assumptions for estimating emission reductions. In addition, support to adapt and update published methodologies when the specific characteristics of the NAMA differ from other countries;

(j) Assistance in the development of approval and registration systems for NAMAs and other GHG mitigation measures to standardize the tracking of mitigation actions and their associated effects;

(k) Assistance in implementation and monitoring of mitigation measures;

(l) Support to more systematically compile and track constraints and gaps, and further specify or translate constraints and gaps into associated financial, technology and capacity-building needs;

(m) Support to conduct a technology needs assessment, especially with regard to the capacity to manage and maintain information systems to manage inventory, mitigation and financial information.

III. Conclusions

57. The TTE concludes that:

(a) Most of the elements of information listed in paragraph 3(a) of the ICA guidelines are included in the first BUR of Peru;

(b) Overall, the Party presents a comprehensive description of the institutional arrangements in place or planned and improvements undertaken to ensure the sustainability of the BUR process. Nevertheless, the BUR contains limited information on the existing institutional arrangements between the inventory agency and the data providers to collect the necessary activity data. Peru does, however, include information on the steps envisaged and that are being taken to strengthen GHG inventory arrangements (e.g. the process to implement INFOCARBONO, which mandates institutional arrangements and will be supported through detailed country-specific sectoral inventory preparation manuals and sectoral meetings). The newest areas of the BUR compared to those of the national communication (i.e. mitigation actions and their effects, constraints and gaps, and support needed and received) are the priority areas in which institutional arrangements need to be further defined and strengthened;

(c) Peru reports, in its BUR, updated information on national GHG inventories covering GHG emissions and removals for the years 1990, 2004 and 2010 using the Revised 1996 IPCC Guidelines and the IPCC *Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories*. For 2010, the Party also used the IPCC good practice guidance for LULUCF. However, Peru has not transparently reported on methodological choice or sources of activity data and emission factors used in the estimation of emissions. Further, the plans in place to investigate the categories that were not reported are not included in the BUR. While Peru did update its methods used for prior inventory years 1994 and 2000, the improvements in applying the IPCC good practice guidance for LULUCF sector estimates were limited to estimates for 2010. With regard to completeness of the inventory, in addition to the findings described earlier, Peru has not estimated CO_2 from fuel combustion using both the reference approach and the sectoral approach, in order to analyse the differences between the approaches. During the communications between the TTE and the Party, Peru confirmed its plans to take into account the need to continuously improve transparency, consistency, comparability, completeness and accuracy in its national GHG inventories. Peru also confirmed that its capacity-building needs for the next year (2016) by sector will be identified more clearly for the first time in preparation for the second BUR this year (2015);

(d) Peru transparently reports part of the elements of information on mitigation actions required in decision 2/CP.17, annex III, chapter IV. The objectives and descriptions are clearly explained for most of the mitigation actions. However, information on coverage, quantitative goals and progress indicators is only partially provided. Peru does not provide information on the methodologies and assumptions used to estimate emission reductions. In consultation with the Party, the TTE received clarification that all NAMAs in Peru are under formulation and, for this reason, emission reductions are still being calculated. Consequently, the progress of implementation of the mitigation actions is not contained in the BUR;

(e) Peru includes information on institutional arrangements for the design and national approval of NAMAs and CDM projects. However, the Party does not provide specific information about the institutions, entities, arrangements and systems involved in the domestic monitoring of NAMAs;

(f) Peru provides a transparent and comprehensive summary of financial support received across critical components of the BUR and, more generally, on climate change related programmes, projects and activities. Peru is taking the necessary steps to establish a mechanism that allows for the continuous collection and reporting of this information. However, general and limited information is provided on constraints and gaps, and related financial, technical and capacity-building needs. The TTE noted that the inclusion of this information would further enhance the transparency of national circumstances and the progress made on implementing mitigation in Peru. During communication with the TTE,

the Party confirmed that the systematic collection of data on this area constitutes a capacity-building need, and that there are plans to better report on such aspects in the next BUR. The TTE noted that information on technology needs has not been included in the BUR; Peru informed that the information was not included mainly due to time and resource constraints.

58. The TTE, in consultation with Peru, identified 13 capacity-building needs related to the facilitation of reporting in accordance with annex III to decision 2/CP.17 and to the participation in ICA in accordance with annex IV to decision 2/CP.17, taking into account Article 4, paragraph 3, of the Convention. Key capacity-building needs prioritized by Peru are summarized in chapter II.D above.

Annex

Documents and information used during the technical analysis

Reference documents

"Composition, modalities and procedures of the team of technical experts for undertaking the technical analysis of biennial update reports from Parties not included in Annex I to the Convention". Annex to decision 20/CP.19. Available at <http://unfccc.int/resource/docs/2013/cop19/eng/10a02.pdf#page=12>.

"Modalities and guidelines for international consultation and analysis". Annex IV to decision 2/CP.17. Available at <http://unfccc.int/resource/docs/2011/cop17/eng/09a01.pdf>.

"UNFCCC biennial update reporting guidelines for Parties not included in Annex I to the Convention". Annex III to decision 2/CP.17. Available at <http://unfccc.int/resource/docs/2011/cop17/eng/09a01.pdf>.

"Guidelines for the preparation of national communications from Parties not included in Annex I to the Convention". Annex to decision 17/CP.8. Available at <http://unfccc.int/resource/docs/cop8/07a02.pdf#page=2>.

First biennial update report of Peru. Available at <http://unfccc.int/8722.php>.

Second national communication of Peru. Available at <http://unfccc.int/national_reports/non-annex_i_natcom/items/2979.php>.